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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JEFFREY W. MOEHLLENBRUCK  
JOHN P. RANIERI

Serial No.: 10/812,268

Filed: March 29, 2004

For: METHODS AND COMPOSITIONS FOR  
TREATING INTERVERTEBRAL DISC  
DEGENERATION

Group Art Unit: 1615

Examiner: Unknown

Atty. Dkt. No.: 2103.013882

Customer No.: 45488

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING  
37 C.F.R 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

March 3, 2005

Date

Mark D. Moore

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Supplemental Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed foreign patent documents and journal articles required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Supplemental Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Supplemental Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Supplemental Information Disclosure Statement; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Director is hereby authorized to deduct said fees from Williams, Morgan & Amerson, P.C., Deposit Account No. 50-0786/2103.013882.

Applicants respectfully request that the listed documents be made of record in the present case.



Respectfully submitted,

WILLIAMS, MORGAN & AMERSON  
CUSTOMER NO. 45488

Date: March 3, 2005

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AGENT FOR APPLICANT

Form PTO-1449 (modified)

Atty. Docket No.

2013.013882

Serial No.

10/812,268

**List of Patents and Publications for Applicant's  
INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

Applicant

Jeffrey W. Moehlenbruck and John P. Ranieri

Filing Date:

March 29, 2004

Group:

1615

**U.S. Patent Documents***See Pages 1-2***Foreign Patent Documents***See Pages 2-3***Other Art***See Pages 3-4***U.S. Patent Documents**

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A77	2003/0236574	12-2003	Bittman <i>et al.</i>	623	23.63	03-11-2003
	A78	6,582,471 B1	06-2003	Bittmann <i>et al.</i>	623	23.63	08-12-1998
	A79	6,514,514 B1	02-2003	Atkinson <i>et al.</i>	424	423	02-16-1999
	A80	6,511,958	01-2003	Atkinson <i>et al.</i>	514	2	02-16-2000
	A81	2002/0040004	04-2002	Benedict <i>et al.</i>	514	21	12-22-2000
	A82	6,372,257 B1	04-2002	Marchosky	424	488	02-29-2000
	A83	2002/0009789	01-2002	Hanyu <i>et al.</i>	435	189	03-19-2001
	A84	6,299,650	10-2001	Van Blitterswijk	623	23.63	07-21-2000
	A85	6,054,122	04-2000	MacPhee <i>et al.</i>	424	94.4	06-07-1995
	A86	6,042,610	03-2000	Li <i>et al.</i>	623	20	02-24-1998
	A87	5,902,785	05-1999	Hattersley <i>et al.</i>	514	2	
	A88	5,707,962	01-1998	Chen <i>et al.</i>	514	12	
	A89	5,681,353	10-1997	Li <i>et al.</i>	623	18	
	A90	5,563,124	10-1996	Damien <i>et al.</i>	514	21	
	A91	5,510,121	04-1996	Rhee <i>et al.</i>	424	520	
	A92	5,393,739	02-1995	Bentz <i>et al.</i>	514	12	
	A93	5,368,858	11-1994	Hunziker	424	423	
	A94	5,356,630	10-1994	Laurencin <i>et al.</i>	424	426	
	A95	5,290,763	03-1994	Poser <i>et al.</i>	514	21	
	A96	5,270,300	12-1993	Hunziker	514	12	
	A97	5,206,023	04-1993	Hunziker	424	423	
	A98	4,952,404	08-1990	Vallee <i>et al.</i>	424	422	

**EXAMINER:****DATE CONSIDERED:**

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. 2013.013882	Serial No. 10/812,268
List of Patents and Publications for Applicant's  INFORMATION DISCLOSURE STATEMENT  (Use several sheets if necessary)		Applicant Jeffrey W. Moehlenbruck and John P. Ranieri	
		Filing Date: March 29, 2004	Group: 1615
U.S. Patent Documents <i>See Pages 1-2</i>	Foreign Patent Documents <i>See Pages 2-3</i>	Other Art <i>See Pages 3-4</i>	

### U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A99	4,902,296	02-1990	Bolander <i>et al.</i>	623	16	
	A100	4,863,732	09-1989	Nathan <i>et al.</i>	424	95	
	A101	4,774,227	09-1988	Piez <i>et al.</i>	514	21	
	A102	4,761,471	08-1988	Urist	530	350	
	A103	4,743,259	05-1988	Bolander <i>et al.</i>	623	16	
	A104	4,678,470	07-1987	Nashef <i>et al.</i>	623	16	
	A105	4,620,327	11-1986	Caplan <i>et al.</i>	632	10	
	A106	4,619,989	10-1986	Urist	530	417	
	A107	4,596,574	06-1986	Urist	623	16	
	A108	4,529,590	07-1985	LeVeen <i>et al.</i>	424	95	
	A109	4,455,256	06-1984	Urist	260	112R	
	A110	4,172,128	10-1979	Thiele <i>et al.</i>	424	95	
	A111	3,927,205	12-1975	Ohno <i>et al.</i>	424	80	

### Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Transiation Yes/No
	B7	CN 1163780A	04-1997	China	A61K	38/18	Yes
	B8	EP 0896825 A1	02-1999	Europe	A61L	27/00	Yes
	B9	WO 92/09697	06-1992	PCT	C12P	21/00	Yes
	B10	WO 95/13767	05-1995	PCT	A61F	2/28	Yes
	B11	WO 96/41818	12-1996	PCT	C08B	37/08	Yes
	B12	WO 98/35653	08-1998	PCT	A61K	9/14	Yes

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Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B13	WO 99/08728	02-1999	PCT	A61L	27/00	Yes
	B14	WO 00/48550	08-2000	PCT	A61K		Yes

### Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C48	Atkinson <i>et al.</i> , Elucidation of Homeoprotein Cart-1 Function During <i>In Vitro</i> Chondrogenesis of C3H10T1/2 Micromass Cultures," <i>Ann. NY Acad. Sci.</i> , 785:206-08, 1996
	C49	Atkinson <i>et al.</i> , "Combination of osteoinductive bone proteins differentiates mesenchymal C3H/10T1/2 cells specifically to the cartilage lineage," <i>J. Cell. Biochem.</i> , 65:325-39, 1997.
	C50	Bourque <i>et al.</i> , "Expression of four growth factors during fracture repair," <i>Int. J. Dev. Biol.</i> , 37:573-79, 1993.
	C51	Chen <i>et al.</i> , "Streaming potentials during the confined compression creep test of normal and proteoglycan-depleted cartilage," <i>Ann. Biomed. Eng.</i> , 25:269-77, 1997.
	C52	Chernousov <i>et al.</i> , "Role of the I-9 and III-1 Modules of Fibronectin in Formation of an Extracellular Fibronectin Matrix," <i>J. Biol. Chem.</i> , 266:10851-58, 1991.
	C53	de Groot <i>et al.</i> , "Meniscal tissue regeneration in porous 50/50 copoly(L-lactide/epsilon-caprolactone) implants," <i>Biomaterials</i> , 18:613-22, 1997.
	C54	Fidian <i>et al.</i> , "Material properties and structure-function relationships in the menisci," <i>Clin. Orthoped.</i> , 252:19-31, 1990.
	C55	Hashimoto <i>et al.</i> , "Meniscal repair using fibrin sealant and endothelial cell growth factor. An experimental study in dogs," <i>Am. J. Sports Med.</i> , 20:537-41, 1992.
	C56	Hu <i>et al.</i> , "Injection of basic fibroblast growth factor and bone morphogenetic protein for osteogenesis stimulation," <i>Chemical Abstracts 63-Pharmaceuticals</i> , 132:1132(40522), 2000.
	C57	Ibarra <i>et al.</i> , "Tissue engineered meniscus: a potential new alternative to allogeneic meniscus transplantation," <i>Transplant Proc.</i> , 29:986-88, 1997.

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Exam. Init.	Ref. Des.	Citation
	C58	Kempson <i>et al.</i> , "The tensile properties of the cartilage of human femoral condyles related to the content of collagen and glycosaminoglycans," <i>Biochim. Biophys. Acta.</i> , 297:456-72, 1973.
	C59	Levine <i>et al.</i> , "Bone Morphogenetic Protein Promotes Vascularization and Osteoinduction in Preformed Hydroxyapatite in the Rabbit," <i>Annals of Plastic Surgery</i> , 39:158-68, 1997.
	C60	Lucas <i>et al.</i> , "Ectopic induction of cartilage and bone by water-soluble proteins from bovine using a collagenous delivery vehicle," <i>J. Biomed. Mater. Res.</i> , 23:23-39, 1989.
	C61	McDevitt and Webber, "The Ultrastructure and Biochemistry of Meniscal Cartilage, <i>Clin. Orthop.</i> , 252:8-18, 1990.
	C62	Riesle <i>et al.</i> , "Collagen in tissue-engineered cartilage: types, structure, and crosslinks," <i>J. Cell Biochem.</i> , 71:313-27, 1998.
	C63	Sakaguchi <i>et al.</i> , "A Combination of EGF and IGF-1 Accelerates the Progression of Meiosis in Bovine Follicular Oocytes In Vitro and Fetal Calf Serum Neutralizes the Acceleration Effect," <i>Theriogenology</i> , 54:1327-42, 2000.
	C64	Sampath <i>et al.</i> , "Recombinant Human Osteogenic Protein-1 (hOP-1) Induces New Bone Formation <i>In Vivo</i> with a Specific Activity Comparable with Natural Bovine Osteogenic Protein and Stimulates Osteoblast Proliferation and Differentiation <i>In Vitro</i> ," <i>J. Biol. Chem.</i> , 267:20352-62, 1992.
	C65	Schor <i>et al.</i> , "Motogenic activity of IGD-containing synthetic peptides," <i>J. Cell Science</i> , 112:3879-88, 1999.
	C66	Spilker <i>et al.</i> , "A transversely isotropic biphasic finite element model of the meniscus," <i>J. Biomech.</i> , 25:1027-45, 1992.
	C67	Yonggang <i>et al.</i> , "Percutaneous injection of bone morphogenetic protein and polyvinyl pyrrolidone composite," <i>J. Xi'an Medical University</i> , 22:132-33, 2001.

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